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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,978

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Sang-Ik Lee

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EXAMINER

BELL, CHARLES NEWTON

ART UNIT

PAPER NUMBER

4116

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,978	Applicant(s) LEE ET AL.	
	Examiner CHARLES BELL	Art Unit 4116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 20-24 is/are rejected.
- 7) ☒ Claim(s) 2-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/20/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagata et al. (U. S. Pat. No. 5,918,480), in view of Kronenberger et al. (U. S. Pat. No. 4,013,434).

Fig. 27 of Nagata et al. discloses a vegetable room (3, and see col. 1, ln. 24) for a refrigerator comprising: a vegetable box (7, and see col. 1, ln. 29 and 30) disposed inside a refrigerator in which a cooling air supply unit (see col.1, ln. 51 and 52) is provided and, having a receptacle space opened upwardly; a box cover (9, and see col. 1, ln. 34) and having a cooling air ventilating hole (10, and see col. 1, ln. 38) formed at one side thereof; wherein additional air ventilating holes can be placed on the fruit container (col. 3, ln. 51-55); a cover support unit (11, and see col. 1, ln. 39) interposed between the box cover and the shelf. It is noted that Nagata et

al. does not specifically disclose a plurality of shelves, a plurality of opening and closing members; and an operating unit.

However, Figs. 1 and 2 of Kronenberger et al. teach a plurality of shelves (19, and see col. 2, ln. 22), a plurality of opening and closing members (72 and 74, and see col. 3, ln. 19-21); and an operating unit (78, and 80-82, and see col. 3, ln. 40 and 41). Hence, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the apparatus of Nagata et al. with the teachings of Kronenberger et al. to obtain a device to provide a vegetable room for a refrigerator that is capable of maintaining food items stored in a vegetable box fresh regardless of environmental conditions outside a refrigerator.

4. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagata et al. in view of Kronenberger et al. as applied to claim 1 above, and further in view of Kim et al. (U. S. Pat. No. 6,367,276 B1).

Nagata et al. and Kronenberger et al. disclose a vegetable room as described above. It is noted that Nagata et al. and Kronenberger et al. do not specifically disclose a plurality of ribs formed at the bottom of the box cover with a certain height and with a certain width; wherein the ribs have a grid form.

However, Fig. 3 of Kim et al. teaches a plurality of ribs formed at the bottom of the box cover with a certain height and with a certain width (210, and see col. 4, ln. 17) (as per claim 20); wherein the ribs have a grid form (see col. 4, ln. 28) (as per claim 21). Hence, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the

apparatus of Nagata et al. and Kronenberger et al. with the teachings of Kim et al. to obtain a device to collect moisture existing in the vegetable box and prevent it from being discharged outwardly from the vegetable box.

5. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagata et al. in view of Kronenberger et al., and further in view of Chang (U. S. Pat. No. 6,070,419).

Nagata et al. and Kronenberger et al. disclose a vegetable room. It is noted that Nagata et al. and Kronenberger et al. do not specifically disclose a cooling air discharge hole of a cooling air discharge duct positioned between the box cover and the shelf at the rear side of the refrigerator; wherein a nozzle is provided at a front side of the cooling air discharge hole, of which sectional area is diminished as it goes from a rear side to a front side; wherein the nozzle is provided to be positioned at a rear side of the rearmost cooling air ventilating hole.

However, Figs. 6 and 9B of Chang teach a cooling air discharge hole (52) of a cooling air discharge duct (3) is positioned between the box cover and the shelf at the rear side of the refrigerator, (as per claim 22); wherein a nozzle (51) is provided at a front side of the cooling air discharge hole, of which sectional area is diminished as it goes from a rear side to a front side, (as per claim 23); wherein the nozzle is provided to be positioned at a rear side of the rearmost cooling air ventilating hole, (as per claim 24), (see col. 4, ln. 33-36 and 49 and 50). Hence, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the apparatus of Nagata et al. and Kronenberger et al. with the teachings of Chang to obtain a device which a cooling air discharge hole of a cooling air discharge duct mounted at a

rear side of a refrigerator so that cooling air can be introduced between the box cover and the shelf, and a nozzle with a sectional area diminished as it goes from the rear side to the front side in order to increase the discharge speed of cooling air.

Allowable Subject Matter

6. Claims 2-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the examiner notes that in regard to claim 2, the feature of the cover support unit formed eccentric toward the front side on the basis of the center of the box cover was not found in a search of the prior art of record; in regard to claim 6, the feature of the cooling air ventilating hole formed perpendicular to the air flow was not found in a search of the prior art of record; in regard to claim 7, the feature of the opening and closing member comprising first and second members rotatably supported at an inner side of the first and second ventilating hole was not found in a search of the prior art of record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES BELL whose telephone number is (571)270-5538. The examiner can normally be reached on 7:00AM - 4:30PM EST Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Cheng can be reached on (571)272-4433. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. B./

Examiner, Art Unit 4116

/Sam Chuan C. Yao/

Supervisory Patent Examiner, Art Unit 4111